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**NOTES ON WEST INDIAN ORTHOPTERA, WITH A LIST
OF THE SPECIES KNOWN FROM THE ISLAND
OF PORTO RICO.**

BY JAMES A. G. REHN.

The material on which this study is based is contained in the collections of the United States National Museum and the Academy of Natural Sciences of Philadelphia; the collections of the respective institutions are designated in the following paper by their initials. Permission to examine the National Museum material was secured through the kindness of Mr. W. H. Ashmead of that institution. All material from Porto Rico, unless otherwise stated, was collected by Mr. August Busck of the U. S. Department of Agriculture.

Family FORFICULIDÆ.

Anisolabis annulipes (H. Lucas).

One female; Fajardo, Porto Rico. February, 1899. (U. S. N. M.)

Anisolabis maritima (Gené).

Two males; Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Anisolabis azteca (H. Dohrn).

Three males, thirteen females:

Utuaado, Porto Rico, January, 1899. (U. S. N. M.)

Arroyo, Porto Rico, February, 1899. (U. S. N. M.)

Bayamon, Porto Rico, January, 1899. (U. S. N. M.)

Fajardo, Porto Rico February, 1899. (U. S. N. M.)

Mayaguez, Porto Rico, January, 1899. (U. S. N. M.)

Ponce, Porto Rico, April 16th. (U. S. N. M.)

Jamaica. (A. N. S. P.)

Labidura riparia (Pallas).

One male, four females; Fajardo, Porto Rico. February, 1899. (U. S. N. M.)

Apterygida gravidula (Gerstaecker).

Three males, one female; Aguadilla, Porto Rico. January, 1899. (U. S. N. M.)

Apterygida buscki n. sp.

Type: ♀; Utuaado, Porto Rico. January, 1899. Collected by August Busck.

Allied to *A. percheron* (Guérin) from Cayenne and St. John, West Indies, but differing in the small exposed portion of the wings, the greater size and the entire absence of ochraceous coloration from the insect, the general tint being dull blackish brown.

Size medium; body moderately depressed, subfusiform. Head cordiform, antennæ moniliform, 15-16 jointed. Pronotum subquadrate, the anterior and lateral margins straight, the posterior rotundate; centrally with a longitudinal depression. Elytra rather elongate, posteriorly subtruncate, the surface slightly scabrous. Wings projecting beyond the elytra as slight truncate plates. Abdomen considerably wider than the width across the elytra, the lateral folds but slightly developed; anal segment transverse with a central longitudinal sulcus; pygidium small; forceps straight with the apex falcate, quadrate in section at the base, inner margin with blunt denticles.

General color deep blackish brown, becoming fuscous on the lower portions of the limbs. Antennæ with two joints (12-13) ochraceous.

MEASUREMENTS.

Total length		21.5 mm.
Length of pronotum		2.7 "
Length of elytra		3.7 "
Length of forceps		4.5 "

Two paratypes have been examined of this species, which I take pleasure in dedicating to my friend, Mr. August Busck, who collected the series. One female from El Yunque, Porto Rico, collected in February by Dr. C. W. Richmond was also examined.

Family BLATTIDÆ.

Phyllodromia bivittata Serville.

One specimen; Fajardo, Porto Rico. February, 1899. (U. S. N. M.)

Phyllodromia punctulata (Palisot).

One specimen; Utuado, Porto Rico. January, 1899. (U. S. N. M.)

This specimen appears to be identical with the insect figured by Palisot, who recorded the species from San Domingo.

Phyllodromia delicatula Guérin.

One specimen; Mayaguez, Porto Rico. January, 1899. (U. S. N. M.)

Nyctibora mexicana Saussure.

One specimen; Jamaica. (A. N. S. P.)

Periplaneta americana (Linnæus).

Three specimens; Jamaica. (A. N. S. P.)

Periplaneta australasie (Fabricius).

One specimen ; Jamaica. (A. N. S. P.)

Plectoptera porcellana (Saussure).

One specimen ; Mayaguez, Porto Rico. January, 1899. (U. S. N. M.)

Plectoptera poeyi (Saussure).

One specimen ; Vieques Island, Porto Rico. February, 1899. (U. S. N. M.)

Leucophæa maderæ (Fabricius).

One specimen ; Bahama Islands. (A. N. S. P.)

Pynoscelus surinamensis (Linnæus).

Two specimens ; Jamaica. (A. N. S. P.) Fajardo, Porto Rico. February, 1899. (U. S. N. M.)

Panchlora peruana Saussure.

One specimen ; Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Panchlora virescens (Thunburg).

One specimen ; Porto Rico. January 18, 1899. Paul Beckwith. (U. S. N. M.)

Panchlora exoleta (Burmeister).

Four specimens ; Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Blaberus atropis (Stoll).

Six specimens ; Santiago de Cuba. February 24, 1902. S. H. Hamilton. (A. N. S. P.)

Blaberus rufescens (Saussure).

One specimen ; Porto Rico. (A. N. S. P.)

Family MANTIDÆ.

Stagmomantis dimidiata (Burmeister).

Five males ; Jamaica. (A. N. S. P.)

Callimantis antillarum (Saussure).

Two males, two immature specimens ; Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Theoclytes cingulata (Drury).

One male ; Jamaica. (A. N. S. P.)

This rare species is strictly an Antillean form, and the records from So. America, as shown by Saussure and Zehntner (Biol. Cent.-Amer., Orth., i, p. 192), belong to another species.

Family PHASMIDÆ.

Lamponius portoricensis n. sp.

Type: ♀; Fajardo, Porto Rico. February, 1899. Collected by August Busck. (U. S. N. M.)

Apparently a member of this genus, but not closely related to *L. guerini* (Saussure) the type. It differs in the smaller size, the granulate head and thorax, and the differently shaped apex of the abdomen.

Form thick and heavily built. Head somewhat flattened, the region between the antennal bases with an elevated transverse ridge, the basioccipital region with several low tubercles; dorsal joint of the antennæ flattened, the upper surface undulate. Pronotum almost quadrate, the lateral margins carinate and spined, centrally with two longitudinal rows of tubercles of three each. Mesonotum about three times as long as the pronotum, with a longitudinal median carina, the surface tuberculate. Metanotum with the median segment slightly shorter than the mesonotum, posteriorly expanding. Abdomen slightly tapering, the superior terminal plate transverse, the posterior margin rounded. Femora very short, the median pair of limbs equalling the metanotum and median segment in length, the posterior pair of limbs reaching the apex of the second abdominal segment. Tibiæ shorter than their respective femora. Tarsus with the three basal joints subequal.

General color dull yellowish green, the antennæ with the apical portions of the large segments bearing a more or less distinct blackish blotch.

MEASUREMENTS.

Length of head and body	32. mm.
Length of mesonotum	7.5 "
Length of metanotum (with median segment)	.5 "
Length of anterior femora	5.5 "
Length of median femora	5.5 "
Length of posterior femora	5.5 "

Bacunculus dryas (Westwood).

One male; Mayaguez, Porto Rico. January, 1899. (U. S. N. M.)

Clonistria sp.

One female; Jamaica. (A. N. S. P.)

Aplopus jamaicensis (Drury).

Two females; Jamaica. (A. N. S. P.)

Family ACRIDIDÆ.

Paratettix frey-gessneri Bolivar.

One female; Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

Orphulella punctata (De Geer).

Two females :

St. Vincent. (A. N. S. P.)

Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

Plectrotettix gregarius (Saussure).

Eleven males, twenty three females, two nymphs :

Utuaado, Porto Rico. January, 1899. (U. S. N. M.)

Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Vieques Island, Porto Rico. February, 1899. (U. S. N. M.)

Mayaguez, Porto Rico. January, 1899. (U. S. N. M.)

This species can readily be separated from *P. viatorius* (Saussure) of Mexico by its smaller size, and more angulate fastigium when viewed laterally. The latter character is quite striking.

Sphingonotus jamaicensis Saussure.

Two females ; Jamaica. (A. N. S. P.)

Sphingonotus haitensis (Saussure).

Two females :

Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Schistocerca americana (Drury).

Two males, four females :

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Mayaguez, Porto Rico. January, 1899. (U. S. N. M.)

Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

Schistocerca ægyptia (Thunberg).

Six males, nine females :

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Mayaguez, Porto Rico. January, 1899. (U. S. N. M.)

Vieques Island, Porto Rico. February, 1899. (U. S. N. M.)

Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

Family TETTIGONIDÆ.

Microcentrum triangulatum Brunner.

Two females :

Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

This form was previously known only from Guadeloupe and St. Thomas.

Conocephalus guttatus Serville.

One male and one female; Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Conocephalus macropterus Redtenbacher.

Two females:

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Porto Rico. January 18, 1899. Paul Beckwith. (U. S. N. M.)

Xiphidion fasciatum (De Geer).

Four males, six females:

Jamaica. (A. N. S. P.)

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Arroyo, Porto Rico. February, 1899. (U. S. N. M.)

Mayaguez, Porto Rico. January, 1899. (U. S. N. M.)

Rio Piedras, Porto Rico. June, 1902. O. W. Barrett. (A. N. S. P.)

Jamaicana vittata Brunner.

One immature specimen; Jamaica. (A. N. S. P.)

Family GRYLLIDÆ.

Scapteriscus didactylus (Latreille).

Twelve specimens:

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Utuado, Porto Rico. January, 1899. (U. S. N. M.)

Fajardo, Porto Rico. February, 1899. (U. S. N. M.)

Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Porto Rico. January 18, 1899. Paul Beckwith. (U. S. N. M.)

Rio Piedras, Porto Rico. February 25, 26 and 28, 1902. Otis W. Barrett. (A. N. S. P.)

Ellipes minuta (Scudder).

Three specimens; Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Gryllus assimilis Fabricius.

Three males, two females:

Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Porto Rico. January 18, 1899. Paul Beckwith. (U. S. N. M.)

Gryllodes muticus (De Geer).

Two males, one female :

Rio Piedras, Porto Rico. May, 1902. O. W. Barrett. (A. N. S. P.)

Vieques Island, Porto Rico. February, 1899. (U. S. N. M.)

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Gryllodes poeyi (Saussure).

One male, one female :

El Cobre, Santiago Prov., Cuba. February 22, 1902. S. H. Hamilton. (A. N. S. P.)

Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

Amphiacusta caraibea Saussure.

One male; Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

This specimen agrees perfectly with Saussure's description of this species from Guadeloupe, except in the shape of the lower margins of the lateral lobes of the pronotum, which are diagonally emarginate instead of "subrecto" as Saussure describes them.

Anaxipha pulicaria (Burmeister).

One female; Culebra Island, Porto Rico. February, 1899. (U. S. N. M.)

Cyrtoxipha imitator Saussure.

One male; Santa Ana, Santiago Prov., Cuba. March 4, 1902. S. H. Hamilton. (A. N. S. P.)

Diatrypa sibilans Saussure.

One female; Bayamon, Porto Rico. January, 1899. (U. S. N. M.)

There is some little doubt in the determination of this specimen, as the apex of the ovipositor is acute, while Saussure describes it as obtuse.

LIST OF THE SPECIES OF ORTHOPTERA KNOWN FROM PORTO RICO.

The names of the species previously noted have been collected from Scudder's Index (Occasional Papers, Boston Soc. Nat. Hist., vi, 1901), and only forms that have positively recorded from the Island and dependencies have been included. The species included in the Index are preceded by an asterisk.

Family FORFICULIDÆ.

- | | |
|---|---|
| * <i>Labidura riparia</i> (Pallas). | <i>Anisolabis azteca</i> (H. Dohrn). |
| * <i>Psalis gagathina</i> (Burmeister). | * <i>Apterygida bimaculata</i> (Palisot). |
| <i>Anisolabis annulipes</i> (H. Lucas). | <i>Apterygida gravidula</i> (Gerst.). |
| <i>Anisolabis maritima</i> (Gené). | <i>Apterygida buscki</i> Rehn. |

Family BLATTIDÆ.

- | | |
|---|--|
| * <i>Anaplecta dorsalis</i> Burmeister. | <i>Plectoptera poeyi</i> (Saussure). |
| <i>Phyllodromia bivittata</i> Serville. | <i>Pycnoscelus surinamensis</i> (Lin- |
| * <i>Phyllodromia delicatula</i> Guérin. | næus). |
| <i>Phyllodromia punctulata</i> (Palisot). | <i>Panchlora peruana</i> Saussure. |
| * <i>Phyllodromia supellectilium</i> (Ser- | <i>Panchlora virescens</i> (Thunberg). |
| ville). | <i>Panchlora exoleta</i> Burmeister. |
| * <i>Ischnoptera blattoides</i> (Saussure). | <i>Blaberus rufescens</i> Saussure. |
| * <i>Ischnoptera rufa</i> Brunner. | * <i>Hemiblabea manca</i> Saussure. |
| <i>Plectoptera porcellana</i> (Saussure). | * <i>Hemiblabea brunneri</i> (Saussure). |

Family MANTIDÆ.

Callimantis antillarum (Saussure).

Family PHASMIDÆ.

- | | |
|--|--|
| <i>Lamponius portoricensis</i> Rehn. | * <i>Bacteria</i> (Pseudobacteria) yer- |
| <i>Bacunculus dryas</i> (Westwood). | siniana Saussure. |
| * <i>Clonistria linearis</i> (Drury). | * <i>Diapherodes angulata</i> (Fabricius). |
| * <i>Phibalosoma</i> (<i>Xylodus</i>) <i>adum-</i> | * <i>Aplopus micropterus</i> (Lepel. and |
| <i>bratum</i> (Saussure). | Serv.). |
| * <i>Bacteria calamus</i> (Fabricius). | * <i>Acanthoderus cornutus</i> (Bur- |
| | meister). |

Family ACRIDIDÆ.

- | | |
|--|---|
| <i>Paratettix frey-gessneri</i> Bolivar. | <i>Sphingonotus haitensis</i> (Saussure). |
| <i>Orphulella punctata</i> (De Geer). | <i>Schistocerca americana</i> (Drury). |
| <i>Plectrotettix gregarius</i> (Saussure). | <i>Schistocerca ægyptia</i> (Thunberg). |

Family TETTIGONIDÆ.

- | | |
|--|--|
| <i>Microcentrum triangulatum</i> Brun- | * <i>Xiphidion fasciatum</i> (De Geer). |
| ner. | * <i>Xiphidion fuscum</i> (Fabricius). † |
| <i>Conocephalus guttatus</i> Serville. | * <i>Polyancistrus serrulatus</i> (Palisot). |
| <i>Conocephalus macropterus</i> Red- | |
| tenbacher. | |

Family GRYLLIDÆ.

- | | |
|---|---|
| * <i>Gryllotalpa hexadactyla</i> Perty. | <i>Amphiacusta caraibea</i> Saussure. |
| * <i>Scapteriscus didactylus</i> (Lat- | <i>Anaxipha pulicaria</i> (Burmeister). |
| reille). | <i>Cyrtoxipha imitator</i> Saussure. |
| <i>Ellipes minuta</i> (Scudder). | * <i>Diatrypa sibilans</i> Saussure. |
| <i>Gryllus assimilis</i> Fabricius. | * <i>Orocharis vaginalis</i> Saussure. |
| * <i>Gryllodes muticus</i> (De Geer) | * <i>Orocharis terebrans</i> Saussure. |
| <i>Gryllodes poeyi</i> (Saussure). | * <i>Orochiris krugii</i> Saussure. |

† This is a European species and its occurrence here is very questionable.